#### Exhibit 2

# **OPERATIONS AND MAINTENANCE STANDARDS**

#### WATER STORAGE TANKS

Each water storage tank shall be washed down with high-pressure water spray once every two years. Once the wash down of the tank is complete, the Department may inspect the storage tank with the Company and determine the integrity of the painting system and any minor repairs. After the inspection is complete, the Company shall submit a report to the Department detailing the condition of the painting system and noted repairs and give a recommendation of when the tank will need repainting. Repainting generally occurs every 15 years.

### WATER MAIN HYDRAULIC MODELING UPDATES

Currently the water model data is being converted to MWSoft's H2ONET. All of the pipes in the Waterworks (over 150,000 pipes) have been converted into one H2ONET computer model. Debugging of the model was proceeding up to the time of the Contract Date. The Company shall immediately complete the debugging of the model and then complete the calibration of the model by the end of 2002, as well as having run successful extended period simulations. During the year 2003, the Company shall develop the water quality component of the model. This will allow the tracking of chemicals through the Waterworks to determine such things as chlorine residual in the outer most regions of the Waterworks. This will also help predict the flow of contamination in the Waterworks from a source.

Currently there are pressure sensors in the Waterworks. These sensors collect real time pressures. The Company shall mount these sensors on hydrants throughout the Waterworks to collect data for calibration of their model. An H2ONET calibration program also exists. The Company shall purchase the program once debugging of the model is complete.

H2ONET also allows the importation of SCADA data for use in the calibration procedures. The Company shall take full advantage of these features.

The Waterworks uses a program called MapGuide by Autodesk as the graphical interface. The distribution system piping is drawn in Autocad and specific distribution system data is entered in an Oracle database. MapGuide exports a shape file into the H2ONET software.

The Waterworks is also linked to the IMAGIS system and all entries are input using state plane coordinates to ensure that the IWC GIS fits together with the IMAGIS system.

The Company shall take over the operation and development of the model and allow the Department access to the model. The Company shall maintain the model by inputting field changes into the model and keeping a record of the model upgrades for the Department's review.

## **GRASS CUTTING**

Grass on all facility grounds shall be moved to a height not less than three inches and shall never exceed six inches in height. This shall not apply to grounds of the canal, reservoirs, etc. This shall only apply to those grounds with facilities present (Plants, Administration Building, Pump

Station, etc.). All grass areas adjacent to all such facilities shall also be trimmed at the same time and to the same standards as mentioned herein. Grass around fire hydrants shall be trimmed to the same standard as facilities (3" and 6"). Grounds around wellfields, the canal, and reservoirs shall be maintained to the same standard as what is being done today.

#### **GRAFFITI**

Upon written or verbal notice, the Company will have 72 hours to remove all graffiti placed on any or all facilities, walls, dams, headwalls, etc. Such removal shall entail completely removing the graffiti or obliterating the graffiti in a manner approved by the Department and visibly acceptable, restoring the object defaced back to its original appearance.

### **BUILDING MAINTENANCE**

All buildings shall be maintained in a condition meeting or exceeding the condition at the Contract Date. Janitorial services shall be done at all facilities as is performed today. All public facilities or public access facilities shall be maintained in a manner exceeding normal parameters and shall include establishing comfortable working environments, including HVAC. All electrical mechanical building services shall be maintained in a manner meeting or exceeding today standards at those facilities and to a level to maintain a safe and comfortable work environment. Repainting of the facilities shall be as required to prevent more rapid deterioration or to prevent a loss of aesthetic value. Issues such as, but not limited to, minor structural deficiencies, roof repairs, building repairs, etc., shall be considered part of the Company's ongoing maintenance and repair program.

### PEST CONTROL

Pest control (including spraying or other safe, suitable and effective methods) shall be utilized at a schedule to assure that all working environments are pest free. There shall be no visible pests (insects, rodents, etc.).

#### **BUILDING SECURITY**

As an interim measure, building security at all facilities shall be maintained to the standard that exists at the Contract Date. As part of the requirements of the Company, building security shall be evaluated at all facilities in accordance with the update of the Emergency Plan.

### RECYCLING

The Company shall endorse recycling efforts for paper, waste products, metals, etc. and shall provide opportunities for the recycling of paper and metals within each facility to be operated. The Company shall report to the Department by January 1 of each year of the Agreement, their efforts in regards to recycling efforts. Such report shall include materials recycled, savings, if applicable, effectiveness and new ideas on recycling.

#### GARBAGE COLLECTION

All garbage shall be collected and disposed of on a regular basis to ensure a safe, aesthetically pleasing, and rodent free environment.

#### PARKING LOTS

All paved parking areas; access to these areas, and asphalt-paved areas shall be sealed on a cycle of no more than every six years. Should cracks develop that exceed three inches in width and longer than two feet, those cracks shall be sealed upon notice by the Department.

#### **DESIGN STANDARDS**

The Waterworks uses a comprehensive set of design standards for its Waterworks development and construction. These standards apply to work constructed by and for the Waterworks, in particular, water mains and associated facilities constructed by commercial and residential real estate developers.

In general, these standards:

- Follow the accepted practices of the waterworks industry
- Meet applicable state rules and regulations
- Meet federal rules and regulations
- Follow the requirements of the "Ten State Standards"
- Follow and utilize ANSI / AWWA Specifications (American National Standards Institute / American Water Works Association)

Waterworks standards address:

- Purpose
- IWCR procedures
- IWCR application procedures
- Inspections
- Specified materials requirements
- Check lists for the IWCR
- Acknowledges the requirements of other agencies such as INDOT / RR
- Scope
- Engineering standards
- Surveying
- Special instructions for contractors
- Standard practice for drawings
  - Plan requirements including record drawings

The Waterworks standards and requirements have been a model for the standards developed by a number of other water utilities. These standards are also compatible with the City of Indianapolis' standards for utilities. The Company will be required to adhere to these standards as well as those of all jurisdictions having authority over repairs within their respective jurisdictions.

### WATER MAIN BREAKS

As with many older distribution systems located in the northern regions of the country, the Waterworks experiences water main breaks during the winter months. During the year 2000, there were between 0.15 and 0.20 breaks per mile of pipe in the IWCR Waterworks. Most of the breaks occur during winter months and are due to a combination of low water temperatures and low outside temperatures. The Company will be required to develop a plan that, at a minimum, map and track all breaks, regardless of cause, in order to monitor the overall integrity of the Waterworks and possible problem areas. That plan shall be maintained on a real-time basis. The following information, at a minimum, shall be maintained; the cause of all breaks, costs of

repairs, time of break, response time to the break, year of break, pipe material, replacement / repair solution. That plan, as well as the annual reporting of this information shall be submitted to the Department for review and comments. The Company shall provide management of the distribution system so as not to exceed the break rate of 0.20 breaks per mile of pipe and shall work towards a break rate that is lowered over the term of the Agreement.

### UNACCOUNTED FOR WATER

It is important that the amount of water that is metered is an accurate representation of what is being consumed. Accurate metering of water helps identify locations where water is being lost. Lost water means lost revenue for the water utility since sewage billings are based upon water billings.

It is understood that all water is metered with the exception of some fire lines within the Waterworks; however, sufficient data cannot be obtained to analyze lost or unaccounted for water. The Company shall produce monthly meter reading reports to compare to pumpage reports for the same month. New accounting software presently being implemented will be utilized that has the potential of being linked to the Waterworks geographic information system (GIS). Upon completion of the implementation of this software, the capability may exist for the accurate determination of customer demands based upon meter readings per district. The Company shall maintain such software with real-time data and produce such reports as called for within this Agreement.

#### DISTRIBUTION VALVES

According to data provided by the IWC, there are more than 31,000 small valves in the IWC distribution system. There are various makes and models of valves in the Waterworks including Darling, Kennedy, Mueller, Smith and Wood. There are approximately 550 valves in the Harbour System, 130 valves in the IWC Morgan System, 70 valves in the Liberty System and 15 valves in the Darlington System. The Company shall maintain the current standards in distribution valves but as a minimum meet the requirements of AWWA Standards, and the Recommended Standards for Water Works dated 1997.

Currently the distribution valve-exercising program that is followed by IWC includes testing large valves (>12 inches) every year while small valves (< 12 inches) are tested every two years. There are broken valves in the distribution system. However, all of the critical valves are repaired shortly after they break. There are approximately 109 broken valves presently listed on a broken valve list. They are not critical to the function of the Waterworks; however, they are in areas that are difficult to access. For example, the valve may be located in the middle of a busy street. These valves are typically fixed in conjunction with other projects, such as a road reconstruction project.

The Company shall maintain the current Waterworks at a level equal to or better than the current levels and keep a list of broken valves with a schedule to repair each valve.

### DISTRIBUTION PIPING

According to data provided by the IWC, the IWC distribution System includes over 3,600 miles of water main dating back to the year 1848. Approximately 200 miles of water main were

installed prior to the year 1900 and approximately 750 miles of water main were installed between the year 1900 and 1950.

The IWC Morgan distribution piping was built during or after the year 1995. Harbour piping was constructed since the early 1970s. Darlington piping dates back to the 1940s and Liberty piping was built after or during the year 1996.

There are over 45 miles of pipe in the Harbour System, over 95 miles of pipe in the IWC Morgan System, over five miles of pipe in the Liberty System and over three miles of pipe in the Darlington System.

Pipe materials found within the IWC distribution System include: asbestos cement (AC), cast iron (CI), copper (CU), polyethylene (PE), polyvinyl chloride (PVC), reinforced concrete (RC), Steel (ST), and ductile iron pipe (DI).

Polyethylene is the preferred material to be installed and has been installed since 1993. Cast iron pipe was typically installed through the year 1950 and ductile iron pipe was typically installed after the year 1950. The Department will also presently accept PVC and ductile iron pipe. PVC pipe was not installed until the 1980s.

No data is available provided for piping materials in IWC Morgan, Harbour, Liberty or Darlington system.

The Company shall maintain the current standards in distribution valves but as a minimum meet the requirements of AWWA Standards, and the Recommended Standards for Water Works dated 1997.

### WELL MAINTENANCE

Each well shall have a formal written history maintained with the intent that this historical information shall be utilized as the basis for timely maintenance action. Timely maintenance action has the purpose of maintaining well yield.

Record data for each well and pump shall include, as a minimum, the following information:

- General information: Wellfield location, well number, capacity (test & pump)
- Well data: Year installed, depth, diameter, formation
- Screen data: Length, diameter, material, slot size, interval (below grade)
- Maintenance and testing data: Latest test date, flow in gpm and gpm/ft draw down, last cleaned date, comments & observations
- Maintenance Record: Formal record of any and all maintenance done for each well
- Pump data: Pump specifications, manufacturer, year installed
- Maintenance Record: Formal record of any and all maintenance done for each pump
- Daily: Pumping volume, hours run, equipment condition observation

- Monthly: Power consumption, total and kwh/million gallons
- Monthly: Pumping and static water levels (draw down)
- Bimonthly: Water quality (bacterial and chemical) sample and analysis

Maintenance for each motor and well pump shall be done at intervals recommended by the manufacturer. Lubrication and adjustments shall be done in accordance with the manufacturers recommendations.

A maintenance inspection shall be made weekly at each well site, or more frequently in the event the maintenance history for the well shows more frequent maintenance attention to be necessary.

Cleaning of each well shall be done as indicated by the wells historic loss of specific capacity. In general, cleaning of a well is to be anticipated as necessary every five to six years, unless the well history shows a longer or shorter time interval between cleaning is in order. In no event shall the pumping water level for a well be allowed to fall below the top of the screen due to loss of specific capacity or any combination of events that may occur. Any event of the pumping level falling below the top of the screen shall be investigated, the cause determined, and appropriate action(s) regarding the well established.

#### **CENTRAL CANAL**

The Central Canal and aqueduct that carries raw water from the White River to the White River Water Treatment Plant (WRWTP) shall be visually inspected frequently. The frequency of inspection shall be not less than monthly with particular attention to those portions of the Canal that have historically shown slope instability. Monthly visual inspection shall have two primary purposes. The first shall be judging the integrity, stability and safety of the Canal embankments to meet its function of carrying raw water to the WRWTP. The second shall be the determination for the necessity of an immediate and/or more frequent and/or intensive inspection of the Canal embankments, in particular the portion of the embankment that has failed in the past. In the event of an unstable embankment area being discovered, the Department shall be immediately notified of the situation. Temporary measures necessary to maintain the integrity of the Canal and prevent a failure shall be implemented.

Maintenance of the Canal shall include but not be limited to the cleaning of debris from the Canal, removal of brush and trees, mowing the embankment top and slopes from water line to toe of slope, correcting any erosion that may occur and repairing any instability of the Canal embankment that may appear. Cleaning of debris includes removal of floating materials, items put into the Canal by unknown parties, objects on the bottom visible from the surface, and any and all materials that restrict the flow of water through the Canal. Removal of brush and trees shall be done in a manner that preserves the established grasses (includes their roots system). Damage to the grasses shall be immediately repaired by appropriate landscaping methods that will prevent erosion. Mowing shall be done on a timely schedule that will maintain a robust growth of grasses on the embankment slopes and top.

Where other infrastructure interfaces with the Canal and conditions develop that may damage the Canal and its ability to carry raw water to the WRWTP, the Department shall be contacted

immediately upon discovery. Measures to correct the problem will be arranged by mutual consent with the Department and accomplished in a timely manner.

### IRISHMAN'S RUN WASTEWATER TREATMENT PLANT

The focus of this project centers on the Waterworks. However, there is one small wastewater plant. The Company shall operate and maintain the Irishman's Run Wastewater Treatment Plant. All the general criteria for safety, reliability, documentation, management, administration, operations and maintenance that apply to the water plants also apply to the wastewater plant. For the wastewater plant, the Company shall abide by all the rules, laws and guidelines applicable to wastewater plants. The plant shall be operated and maintained in such a manner as to ensure consistent and complete compliance with the plant's NPDES permit. The Irishman's Run Wastewater Treatment Plant presently disposes of its sludge by hauling to the Belmont Wastewater Treatment Plant. The Company may continue to use this method of sludge disposal, or may use another Department-approved method of sludge disposal.

### **RESIDUALS**

When the water or wastewater plants purify water, they remove residual waste products. The issue of how to dispose of these residuals needs to be addressed. The Company shall note that there is an initiative to limit the amount of solids to be sent to the Belmont and/or Southport Wastewater Plants. The Irishman's Run Wastewater Treatment Plant and the twelve water treatment plants generate waste sludge. The Company must collect, store, treat and dispose of these wastes in manners approved by the Department. The present method of disposal for most, but not all, of these residual wastes is transport to the existing Belmont and/or Southport Wastewater Treatment Plants. Depending on the plant, transport is either by truck hauling or by discharge to the sanitary sewers. The Company may continue to use the existing method(s) of sludge disposal, or may use other Department-approved method(s) of sludge disposal.

### **COORDINATION OF EFFORTS**

The operations philosophy for water is that the distribution system, at Central Controls, determines the amount of water produced. Whether the Company continues this philosophy or not, the Company must coordinate all aspects of water production with distribution. This is the present method the existing water distribution system generally operates. An operator resides at the Central Control System. From this location, the operator observes important data about the water distribution system. In particular, the operator can observe the pressures, flows, valve status, and pump operations at select areas in the Waterworks. Based on these observations, the operator can manipulate remotely, valves and pumps in the water distribution system. The operator does this manually, based on the flow and pressure data observed in areas of the distribution system. The operator does this based primarily on experience. The operator also directs personnel at each plant, as to how much water should be produced to meet the demands of the water distribution system. The operator at the Central Control System does not remotely control plant operations, nor can the operator observe operations in each plant.

Under this project, the Company shall be responsible for coordinating the efforts of water production and water distribution, to ensure proper water quality, water quantity, and water pressure at all times.

#### WATER PRESSURE

The pressure at the consumer's tap must be adequate for intended uses. The minimum allowable pressure at any customer's tap shall be 30 psig or greater under all flow conditions, except in the following highly localized cases:

- At taps in the immediate area of a major water main break during those hours when the break is active
- At the taps in the immediate area of a major fire event during the time when fire hydrants are being drained.

Maximum water pressures shall be less than what may cause damage to the existing distribution system.

#### **DOCUMENTATION**

Sufficient data records must be maintained to evaluate and document plant performance. The Company shall create, collect, maintain, file and archive detailed, accurate and current data on all plant equipment, plant processes and water quality. As a minimum, this data shall include, for each plant, the following:

- Operations data
- Maintenance data
- Major equipment inventory
- Raw water quality parameters, including turbidity, hardness, pH, iron, manganese, alkalinity, temperature, contaminant concentrations, etc.
- Finished water quality parameters, including turbidity, hardness, pH, iron, manganese, alkalinity, temperature, fluoride, chlorine, contaminant concentrations, etc.
- Raw water flow rate
- Finished water flow rate
- Washwater flow rate
- Number of filters in service
- Amount of waste generated in the treatment of water
- Run times on all pumps greater than 5 horsepower
- Amount of chemicals added, including powder activated carbon, chlorine, caustic, alum, lime, fluoride, etc.
- Data required for proof of compliance with all permits, laws, regulations, and regulatory agencies

### **DAMS**

The Morse Dam, Geist Dam, Broad Ripple Dam, Fall Creek Dam, Fall Creek-Keystone Avenue Bridge Diversion Channel Dam and Williams Creek Cutoff Dam and ancillary structures shall each be inspected annually, during the warm weather period of low flow, and maintained as spelled out below. The annual visual inspections shall have two primary purposes. The first shall be judging the integrity, stability and safety of the Dam and any ancillary structures to meet its function of holding its respective impoundment. The second shall be the determination for the necessity of an immediate and/or more frequent and/or intensive inspection of the Dam and any

ancillary structures due to any indication of deterioration, impairment, relative displacements or other indications of potential detrimental conditions regarding the safety of the facility.

Maintenance shall include maintaining each dam facility in operating condition. This shall include but not be limited to lubrication and adjustment of gates and regulators, removal of floating debris from overflow inlets and screens, and removal of debris from crests and outlet areas. Control and removal of burrowing animals shall be done as required to protect the integrity of the embankment slopes. Mowing shall be done on a timely schedule that will maintain a robust growth of grasses on the embankment slopes and top. Tree, bush and general vegetation removal shall be done in an appropriate manner to maintain the integrity of the banks, slopes, levee's, etc.

#### **BASELINE OPERATIONS**

The following exhibits are provided for information only and may be utilized by the Department, as well as other sources, as an approximate baseline for some of the operations of the waterworks. The Offerors shall be responsible for maintaining or exceeding all management, maintenance and operations levels of the Waterworks and shall determine normal levels in their due diligence process.

- System Pressures
- Pumping Increments
- Reservoir Levels
- Pumpage Summary
- Pump and Well Hours & Runs
- Summary of currently used wells, yields and conditions

These are just examples of the data that will be monitored throughout the life of the Agreement.